Listing of Claims:

1.-9. (Canceled).

10. (Currently Amended) A method for monitoring program execution in a microcomputer in a sensor circuit sensing at least one operating parameter of a motor vehicle, comprising the steps of:

executing, by the microcomputer, a program including processing input data and generating first output data;

executing a copy of the program with the input data intended for the program and generating a second output data, the copy being stored in a different address area of the microcomputer than the program in the microcomputer; and

comparing the second output data from the copy with the first output data from the program and generating an error message if the second output data from the copy do not match the first output data from the program.

11. (Previously Presented) The method of claim 10, further comprising the step of further executing the copy for processing prescribed test data and generating third output data from the prescribed test data, comparing the third output data generated from the prescribed test data with comparative data stored in a memory, and generating an error message if the third output data generated from the prescribed test data do not match the comparative data.

12. (Previously Presented) The method of claim 10, further comprising the steps of one of setting or changing a respective flag following the execution of program portions of the program,

and generating an error message if not all the flags have been set or changed following the execution of the program.

13. (Currently Amended) A method for monitoring program execution in at least two interconnected microcomputers in a sensor circuit sensing at least one operating parameter of a motor vehicle, comprising the steps of:

generating, by one of the microcomputers in the sensor circuit, a request which is transmitted to the other microcomputer in the sensor circuit;

using, by the other of the microcomputers, prescribed input data to prompt the execution of a program in response to receipt of the request;

returning, by the other of the microcomputers, a response which is dependent on the input data to the one of the microcomputers;

comparing, in the one of the microcomputers, the request and the response with one another; and

generating an error message if the request does not match the response.

14. (Previously Presented) The method of claim 13, wherein the program is a copy of another program that performs a function of the other of the microcomputers.

15. (Previously Presented) A method for monitoring program execution in at least two interconnected microcomputers in a sensor circuit for motor vehicles, comprising the steps of:

generating, by one of the microcomputers, a request which is transmitted to the other microcomputer;

using, by the other of the microcomputers, prescribed input data to prompt the execution of a program in response to receipt of the request;

returning, by the other of the microcomputers, a response which is dependent on the input data to the one of the microcomputers;

comparing, in the one of the microcomputers, the request and the response with one another;

generating an error message if the request does not match the response;

introducing a falsification, by the other of the microcomputers, in the response;

identifying, by the other of the microcomputers, the falsification as an error in the response provided to the one of the microcomputers; and

checking, by the one of the microcomputers, for the falsification.

16. (Previously Presented) The method of claim 13, further comprising the steps of one of setting or changing, within the other of the microcomputers, a respective flag in a flag register following the execution of program portions of the program, and generating an error message if not all the flags have been set or changed following the execution of the program.

17. (Previously Presented) The method of claim 16, further comprising the steps of introducing a falsification, by the other of the microcomputers, in the flag register;

identifying, by the other of the microcomputers, the falsification as an error in the response provided to the one of the microcomputers; and

checking, by the one of the microcomputers, for the falsification.

18. (Previously Presented) The method of claim 15, further comprising the steps of counting errors, using an error counter in the one of the microcomputers, which have been detected for the other of the microcomputers; and

not changing the error counter for errors caused by the falsifications introduced by the other of the microcomputers in the response.

19. (Previously Presented) The method of claim 17, further comprising the steps of counting errors using an error counter in the one of the microcomputers which have been detected for the other of the microcomputers; and

not changing the error counter for errors caused by the falsifications in the flag register by the other of the microcomputers.